

DEPARTMENT OF AGRICULTURE, GOVERNMENT OF MYSORE.

No. 30, (Camp) Koppa, dated 25th September 1900.

*The Secretary to the Government of Mysore,
General & Revenue Departments, Bangalore.*

SIR,

In reply to your letter No. 2462—R. 827, dated 18th instant, I beg to say that I have received intimation of insects attacking crops from the Deputy Commissioners of Chitaldrug, Bangalore, and Kolar; and have received a similar intimation from the Amildar of Holé-Narsipur in the Hassan district.

All told four different species of insects were mentioned as attacking crops of various kinds. Samples of three of these species were sent to me in response to my request for samples.

An insect pest, which appears to be spread over a very large portion of the Province and which was particularly numerous in the Kolar district, is that locally known as "Kambalihula." It is of a light brown colour, covered with bristly hairs. As some of them have darker tipped extremities, while others are of uniform colour, this local name evidently embraces more than one species. The attempts made this year to identify them were unsuccessful. Two lots were sent to Major Alcott of the Indian Museum at Calcutta. Both died *en route*. Owing to want of time to give the necessary attention to the matter, the attempts to breed the moth in this office also failed.

These larvae apparently attack all the crops grown on dry lands, though they appear to particularly favour gram, ragi and cholam. The ryots believe them to be poisonous. But I have no authentic information which would confirm that belief.

Unfortunately I did not see any of the badly infested places. Information about the presence of the insect pest did not reach me until after they had practically disappeared. But from what I have seen at Hoskote and elsewhere, it appears to be a comparatively very easy matter to get rid of them. They feed on the leaves of the plants they attack and apparently form no protection for themselves in the way of webs, &c. This being the case, sprinkling, or better, spraying the affected plants with water in which a little "Paris-green" has been suspended, will effectually destroy them.

I intended to demonstrate the application of this insecticide at various places, but unfortunately could not get Paris-green anywhere in India. At my request Messrs. Forster & Co. have sent to England for a large consignment of it some weeks ago. And when the insects re-appear, as doubtlessly they will, I hope that this remedy may be largely employed.

An insect attacking sessamum plants is, so far as I can judge at the time, the "Boll Worm" of America. It is a much more difficult pest to deal with than the above, owing to its feeding in secluded places. I enclose a copy of a letter to the Deputy Commissioner of Bangalore, in which I suggest remedies for the fields affected at Hoskote.

A "Measuring Worm" affecting castor-oil plants was sent by the Deputy Commissioner, Chitaldrug, and forwarded to Major Alcott. He identified it as "Ophinsa-Melicerte." So far as I can judge from isolated castor-oil plants in and about Bangalore, the attack of this pest could be practically overcome by applying Paris-green as recommended for the Kambalihula.

I beg you to kindly place the above information in the hands of the Government, and if they desire a fuller account I shall be glad to give a further report when I return to Bangalore.

Incidentally I might mention that I should like to have the "Indian Museum Notes" which, as you know, treats of insect pests of India; but I am unable to get them except through the Government. But as there are reports from the several Experiment Stations, which I should also like to secure, I shall petition the Government for all of these at the same time.

I have the honor, &c.

A. LEHMANN, Agricultural Chemist.

P. S.—As I mention a fungoid disease in my letter to the Deputy Commissioner of Bangalore, I may state that I have demonstrated the application of the Bordeaux mixture with, judging from the report of the Assistant Commissioner, apparently very satisfactory results. Unfortunately the crops were cut when I re-visited the fields.

No. 63, dated 16th August 1900.

The Deputy Commissioner, Bangalore District.

SIR,

As promised I visited the sessamum fields affected with an insect pest (probably the Boll Worm) near Hoskote. If I have really seen the entire affected area (which the Amildar gave me to understand that I had) the attack is a very local one. I fear, however, that it really covers much larger areas. Furthermore it is not at all unlikely that it affects other taluks as well.

From what I have seen of the habit of the insect so far, I judge that the application of Pyrethrum (mentioned in my previous letter) would not be likely to meet with good results. Paris-green, if it could be had, would be more efficacious. But, as the larvæ feed almost exclusively in protected positions either in the seed pods or more frequently on the inside of a comparatively compact mass of stems, leaves, and flowers held together by a very open web, even an application of this most valuable insecticide could only meet with very limited success, especially during a season of frequent rains.

The only remedy I can think of at present which would be likely to meet with good results is to cut off all the affected parts and burn them. This is not so difficult a task as it might appear at first sight. The affected parts, the tips of the stems or branches have a wilted and sometimes perfectly dried up appearance, and can be easily seen at some distance. The areas under cultivation are small and the plants are comparatively large. A further study of the pest may suggest better remedies. But until such time I should strongly recommend that the ryots be urged to try this remedy, and, if necessary, compelled to do so. For it is only through a united action of all the cultivators that the best results can be obtained. The only place I have found the cocoons of this pest was in the withered tips spoken of above, and this is another reason why these portions should be carefully collected and burnt.

I shall re-visit the affected fields in a few days, and, if this will enable me to suggest any further remedies, I shall write to you again on the subject.

Only on two or three fields at Pujayan Agrahara was a fungoid disease affecting sessamum noticed. This can no doubt be overcome by spraying with Bordeaux mixture.

I have the honor, &c.

A. LEBMANN, *Agricultural Chemist.*

P. S.—I shall gladly prepare the Bordeaux mixture and demonstrate its application to those interested at any time you may desire, provided that I have about a week to get ready in.

A. L.